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ABSTRACT

The way archaeologists use tools and draw inferences about them to disembed meaning from artworks is examined. The prehistoric rock paintings of the Lower Pecos River (Texas) are used to illustrate these ideas. An overview of this rock art, specifically the Amistad reservoir, is provided. The deductions of archaeologists about the semi-nomadic people who lived in this environment, now southwest Texas and northern Mexico are depicted. A method for conducting an art-historical inquiry of the Lower Pecos pictography is outlined. W. Eugene Kleinbauer's definition of art historical inquiry is delineated, and his perspective is used to discuss the pictographs. Examples of intrinsic and extrinsic art historical questions are presented. An overview of the five basic stages of Lower Pecos pictographs is related, beginning with the oldest style--the Pecos River Style, followed by the Red Linear, Bold Line Geometric, Red Monochrome, and the Historic style. Four techniques/methods of the rock-art paintings are outlined: (1) the vegetal fiber brush; (2) artist's fingers; (3) beeswax crayons; and (4) blowing liquefied paint into the rock surface. Early archaeologists' interpretations are compared with more contemporary theories. The conclusion maintains that enhanced understanding of prehistoric and historic rock art requires a multi-disciplinary inquiry and that curricula in schools must be developed to include such information. (KM)

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ART HISTORY AND ARCHAEOLOGY: A SYMBIOTIC RELATIONSHIP

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Who painted them? Why were they painted? What did they mean? many questions come to mind while viewing these pictographs. The Lower Pecos pictographs represent one of the largest and most varied concentrations of archaic rock art in the North America. In terms of preservation, the physical dimensions of the sites, and the span of time over which the works were accomplished, these pictographs have been labeled as "world class sites" (Shafer 1986).

The majority of the work documenting Lower Pecos pictograph sites has been done in the last sixty years. The best known early researcher was Forrest Kirkland. He and his wife produced detailed paintings of many of the area's better known pictographic sites (1937a, 1937b, 1938, 1939). Published at about the same time -- in his monumental survey of the pictographic art of Native Americans throughout Texas -- A.T. Jackson (1938) also extensively described the Lower Pecos rock art.

The first documentation of the region's pictographs to receive widespread public attention was Rock Art of Texas Indians by Kirkland and Newcomb (1967). It was here that many of Kirkland's descriptive watercolors of Lower Pecos rockart were first seen by the general public. The preinundation surveys (1958-1969) were done under the auspices of the National Park Service greatly contributed to the initial documentation of pictograph sites (Gebhard 1960, 1961, 1965; Greider 1965, 1966a, 1966b.). The recent volume Ancient Texans (Shafer 1986) was the first widely distributed publication (for general readership) to provide a color photography survey of the many of the best preserved and most spectacular pictograph sites in the Amistad area.

Archaeology of the Lower Pecos

Archaeologists have deduced much about the lifeways of the people whose artworks enliven this semi-desert environment in the area now called southwest Texas and northern Mexico. There is strong physical evidence that a series of semi-nomadic hunter and gatherer cultures may have occupied the region over an 11,000 period (Alexander 1970; Andrews 1980; Bryant 1974, 1977; Chadderdon 1983; Collins 1968; Dering 1979; Dibble 1967; Epstein 1962; Harris 1977; Haynes 1969, 1980; Johnson 1964; Newcomb 1961; Pearce 1933; Riskind 1970; Schafer 1975; Sorrow 1968a, 1968b; Taylor 1949a, 1949b; Turpin 1982, 1984; Williams-Dean 1978).

Of all the physical remains of the Lower Pecos cultures, undeniably the most spectacular are the pictographs. Although there has been recent and sometimes severe degradation of many pictograph sites, some paintings are still as clear and as vibrant as when first systematically drawn and photographed early

in this century. The conditions in some rockshelters in this region are changing rapidly. This may be due to several factors which are still under investigation: an increase in regional humidity brought about by the presence of Amistad reservoir; the intrusion of recently arrived insect species; and alteration of the microenvironments in the shelters themselves. As conditions in the rockshelters change, so does the condition of many of the the pictographs. Terms such as exfoliation and obfuscation have become all too familiar in reports (J. H. Labadie 1989) on these artworks. Recent reports cite cases where the condition of the rock art has worsened to the point of the loss or obliteration of some pictographs.

Over eons, water has deeply carved spectacular river channels and sheer cliffs hundreds of feet high along many tributary canyons and river valleys in the Lower Pecos region. It was this necessary life resource -- abundant water -- that most likely attracted early inhabitants to the region's caves and rockshelters. It was in these natural shelters that long-standing cultures flourished. Archaeological excavations within rockshelters have provided ample evidence for the way in which Lower Pecos people lived. The picture which emerges is one depicting a relatively stable lifestyle in what, even today, is a harsh and barren land. But the story for these people begins with their migration to the rockshelters more than ten thousand of years ago.

Archaeological evidence demonstrates that the first nomadic people in the Lower Pecos region may have arrived at the end of the last major glacial episode (the Pleistocene or Ice Age Era) about fourteen thousand years ago. They would have found a relatively cool, moist climate that was abundant with grass, large herd and browsing animals -- including mammoth, camel, bison and the American horse -- which periodically roamed the region in great numbers. Between the period of about twelve thousand to ten thousand-five hundred years ago, the first humans ventured into the Lower Pecos region.

Between ten thousand-five hundred to seven thousand years ago (the Holocene or Modern Era) the climate changed again to more of what the visitor of today would experience. As the last glacial period abated, the region gradually became warmer and drier over several thousand years. As the environment changed, new plant communities and animals established themselves. The semi-arid grassland flora mixed with desert succulents such as cacti, sotol, and yucca. The geographic location of the ecotonal boundary between the grasslands and desert region roughly bisects the Lower Pecos region, creating an oasis-like concentration of flora and fauna from several bioemes. As minor cyclic changes in regional climactic patterns occurred since the last ice age, the ecotonal boundary has shifted back

and forth west to east, perhaps lasting several thousand years

Many of the animal species that still populate the region today began to flourish in the more temperate Holocene climate. The ability to exploit such a durable mixture of easily collected, renewable resources set the stages for the first long-term settlement of the region. Although these gatherers and small game hunters did not build permanent structures, it is evident from archaeological materials that they reused the same sites in similar ways for thousands of years. Rockshelters served as homes for hundreds of generations of Lower Pecos people. It is, for the most part, on the walls of their homes that they left the visual records we call the pictographs which are still visible today. (Blair 1950, 1958; Bryant 1974, 1977; Dering 1979; Griffen 1969; Lundelius 1967, 1974; Ridington 1982; Saunders 1986; Shafer 1977; Taylor 1972; Wilson 1977).

The artifacts left behind by the Lower Pecos peoples show they were craftspersons of the first rank. Literally thousands of utilitarian items recovered from dozens of sites demonstrate the high level of sophistication that these people achieved in crafting the world around them to provide for their everyday needs. A few such items are: atlatls (throwing sticks), cradles,baskets, matting, cordage, sandals, fishnets, intricate weavings of many types, mortars and pestles, arrow and spear points, clothing, and what are apparently shamanistic objects.

It is, however, the rock art, the pictographs that range from simple monochrome dots and lines to complex collections of scores of overlapping, mysterious polychrome images covering hundreds of square feet, that provide the most spectacular -- and most elusive -- clues to the inner lives of the people who lived for thousands of years in this seemingly harsh environment. Pictographs are the physical representations of the cognitive activity of these early people. The concepts represented by these pictographs are lost forever; they remain secrets of an extinct culture.

Archaeological Questions

In spite of the apparently abundant material evidence, it is only in the last few decades that archaeologists have made clear progress toward classifying and dating the clues left behind by the people collectively called Lower Pecos cultures. Even today, some of the sites and much of the rock art can still be accurately labeled as obscure in terms of their coverage in current archaeological literature. But, a chronology of Lower Pecos life has begun to be defined.

Investigators have already asked many questions about the people of the Lower Pecos cultures: What did they look like? What

did they wear? How did they stay warm and dry? What did they eat? How did they catch the animals that served as food? What did they do with their dead? What kind of tools and weapons did they have? How long did they live at these sites? What was the social structure?

These, and many other, questions have been carefully considered, and when possible, cautiously answered by investigators from several disciplines. It is useful for the purposes of this paper, however, to note that answers to larger questions about how the people of the Pecos region viewed themselves, what they thought about life and death, and their considerations of the culture in which they lived may also be inferred from this same archaeological evidence, but not, at this time, with the high degree of confidence reserved for some artifacts.

An Art Historical Perspective

Many questions surrounding Lower Pecos pictographs have been considered and many others wait for a means with which to adequately address them. It is toward the question of investigatory means that the following observation is directed: Just as the discipline of archaeology has provided tools used to disembed artifacts from the physical debris accumulated over the centuries and to subsequently draw inferences about them, it may be productive to employ tools provided by the discipline of art history in an attempt to disembed meaning from the unique and only partially deciphered rock art of the Lower Pecos.

Such an effort would direct systematic means derived from art history to define, surround, and delimit answers to questions about certain artworks produced by the Lower Pecos cultures. The rationale for focusing on the Lower Pecos pictograph sites is:

1. They are regarded by archaeologists as world class rockart sites. As such, they provide an opportunity to work with art objects of great significance and relatively high quality.

2. They are defined -- even in archaeological literature -- as obscure in the sense that relatively scant structured inquiry has been conducted about them as artworks. Due in part to this lack of archaeological attention, art-historical inquiry regarding these sites has been almost nonexistent. Since there is a lack of art history literature focusing on these sites, there has been little opportunity to bring them into art education classrooms through the study of art history subject matter.

3. An inquiry focusing on archaeologically well documented but art historically virgin sites might be constructed without the charge that previous art historians have inordinately influenced either the questions asked or the answers posed about the specific works under investigation. It is also worth noting that the application of models for inquiry drawn from aesthetics and art criticism appear as if they would also be similarly without taint from previous work. A paradigm for inquiry might be drawn from these Discipline-Based Art Education knowledge areas without undue influence from other investigations of the artworks proposed for study.

The Means of an Art Historical Inquiry

How would an art historical investigation of the Lower Pecos pictographs be accomplished? An overview of the discipline of art history was recently published by W. Eugene Kleinbauer in a special edition of the Journal of aesthetic education. In this article Kleinbauer describes art history in terms of constituent subdivisions and dominant contemporary perspectives (he also suggests ways of considering the place of art history within the structure of DBAE as proposed by the Getty Trust). Art-historical inquiry as defined by Kleinbauer consists of two modes of inquiry, the intrinsic and the extrinsic.

The first mode focuses on intrinsic factors: connoisseurship, which consists of the identity of materials and techniques, problems of authorship, physical condition, authenticity, dating, and provenance; style, the art objects visual language, composed of a vocabulary of formal qualities or motifs, and a structural syntax governing their relationships; iconography, the investigation of the subject matter or themes of the artwork; and function or purpose, for which the art object was made. In this mode art historians empirically proceed from the art object itself, with which they become intimately familiar, and aim to delineate its fundamental intrinsic properties in terms of one or more of the aspects itemized above. Some of these investigators hold that inquiry should be restricted to these matters and they limit their studies accordingly.

For art historians working within the second mode, a valid understanding of the artwork requires an examination and interpretation of the extrinsic factors and conditions surrounding and shaping it. This group is intent on pursuing more broadly the circumstances of the artworks's time and place, including: artistic biography, psychoanalysis and

> Gestalt and Jungian psychology, semiotics, patronage, and other political, economic, scientific, religious, social, philosophical, cultural, and intellectual determinants; and the history of ideas. In an attempt to understand the artwork in its original context, the extrinsic mode of analysis probes the artist, the nature of the creative process, and the elements that shape the work. This type of inquiry, like the intrinsic one, has as its point of departure the art object itself, but the description and examination of its inherent qualities lead the art historian directly to external evidence, when available, for help in interpreting the object.
>
> The methodologies of these extrinsic approaches are derivative, for the underlying assumption, points of view, and techniques of investigation have been adopted in large measure from other disciplines, especially the social sciences. Whether intrinsic or extrinsic, art history is empirical, systematic, and different from all other disciplines except art criticism in its raw material -- creative objects of the visual arts (1987, p.210-211).

It is the focusing of both intrinsic and extrinsic methods of art historical inquiry on the rock art of the Lower Pecos that may elucidate a greater portion of the meaning and purpose behind the thousands of separate works that make up the oeuvre of Lower Pecos artists. The philosophical differences in focus that art history would bring to this inquiry may result in novel speculation about the artworks in question. As Kleinbauer also notes:

> As a rule art history applies the methodologies of two or more genres in the intrinsic and extrinsic modes alike, for art historians are equipped and inclined to apply a number of appropriate art-historical perspectives to an art-historical problem and to integrate the results obtained from their methodologies for the sake of offering fresh or pioneering, and certainly penetrating, interpretations of the work of art or groups of works (Kleinbauer, 1986, p.212).

In an archaeological sense, the perspective here represents a conservative mode of interpretation. Few liberties have been taken with the interpretation of a site that cannot be supported by evidence in the form of scientific dating methods and significant artifacts discovered in an appropriate context. The art historical perspective of this paper here is quite simply as an attempt to focus attention on the means described by

Kleinbauer as they might be applied to the pictographs under discussion. Questions posed here are defined only with clarifying intent.

The Lower Pecos societies produced numerous forms of apparently symbolic artifacts (non-utilitarian objects) associated with this region's sites. Pictographs are simply the most visible and best known of these artworks. A few of the other objects that may also have had symbolic significance are: fiber bundles in the form of anthropomorphic figures,unfired clay figures, tattooing (observed on mummified human remains), painted sticks, painted pebbles, designs incised into rock surfaces (petroglyphs), painted deer scapula. painted snail shells, and painted fish bones . While many such objects have been studied and are certainly worthy of further investigation, it is only the pictographs that will receive further attention here.

Examples of Art Historical Questions Focused on the Pictographs of the Lower Pecos Region

These questions are indicative of some of the kinds of inquiries phrased by art historians working within the categories of investigation defined by Kleinbauer.

Extrinsic Factors

1. Connoisseurship
   A. Of what are these artworks made?
   B. How were they made?
   C. Who made them and when were they made?
   D. What is the state of their preservation?
   E. In what ways have they been authenticated?
   F. How have they been dated?

2. Style
   A. What are the artworks formal qualities?
   B. What are the basic motifs?
   C. What are the relationships that exist within the works?

3. Iconography
   A. What are the themes?
   B. What is the subject matter?
   C. What do repeated themes suggest?

4. Function
   A. For what purpose(s) were these artworks made?
   B. What might recurring themes tell us?
   C. What is known about the purposes of similar artworks? (Ethnography and anthropology have much to contribute here.)

Intrinsic Factors

5. The artists
   A. What is known about the people who created these artworks?
   B. Was this rock art created by everyone in the culture or was it done only by certain persons within the society?
   C. What is known about the culture in which the artists lived?

6. Religion/belief system
   A. What were the dominant religious tendencies in the culture?
   B. Are the pictographs associated with or representative of a belief system?
   C. Was the it act of painting a pictograph, or the pictograph itself, that was the objective of the artist?

7. Social structure
   A. What were the dominant social structures?
   B. What normative social standards may be evident in the rock art?
   C. Are certain motifs evidence of specific societies or clans?

8. Cultural factors
   A. What was the developmental level of the culture? B. What does the rock art say about the complexity of the Lower Pecos societies?
   C. What was the ethnic derivation of the cultures?
   D. On what base of shared, orally-transmitted ideas, beliefs, and customs were the Lower Pecos societies founded and how is this evidenced in the pictographs?

9. Intellectual factors
   A. What evidence is there about the cognitive ability of the people?
   B. What do abstract visual images tell us about these peoples' concepts of time.

10. Economic factors
   A. Is there any evidence of an economy and, if so, what effect did it have on the culture?

B. What were the primary methods of subsistence? How did they change over time (based on archeology)? What were the factors that stimulated changes in basic subsistence patterns and rockart styles? How are changes inferred from the archaeological record?

11. Language and writing
   A. What evidence is there for language and the oral traditions of the people?
   B. Do the pictographs record data such as a map, or could they be a record of more abstract thoughts and ideas related to religion, cosmology, epistemology?
   C. The people of the Lower Pecos were preliterate; but what do their pictographs indicate about their use of visual symbols?

Lower Pecos Pictographs: An Overview

The exact age for the Lower Pecos pictographs is based on inference rather than absolute chronometric (radiocarbon) dating -- several attempts at radiometric dating have yet to produce satisfactory results. Five basic styles of pictographs have been defined in the region using form, shape, color, geographic location, and relative frequency as criteria for categorization. Relative age has been deduced by factors such as the state of preservation and the analysis of overpainting. Current data on pictographs does not allow for absolute bracketing of time for each style. It does seems highly probable, however, that there was a certain amount of chronological and cultural overlap by the prehistoric societies responsible for producing the rockart.

Pictographs of the Lower Pecos have been classified by archaeologists into these categories:

1. The Pecos River Style is the oldest, and belongs to the Archaic period (site 41 VV 75 has recently been radiocarbon dated at 3865 BP _ 100). Its relative age has been deduced based on the depiction of the atlatl -- the spear thrower -- as a common motif. The image of an anthropomorphic shaman with an atlatl always held in the right hand is repeated in dozens of rockshelters. Pictographs done in the Pecos River Style are among the largest and oldest polychrome and bichrome images on the North American continent. Some of these images -- done in reds, yellows, oranges, and smokey blacks -- are up to sixteen feet in height. Researchers' current estimates of these pictographs' antiquity suggests that they are at least three to four thousand years old (Grieder 1965, 1966a, 1966b; Kirkland and Newcomb 1967; Turpin 1982, 1986a, 1989).

2. The Red Linear Style (after about 500-700 BC) has been the subject of some dispute among contemporary archaeologists. Some claim to find only atlatls, others find bows and arrows as well. Red Linear style pictographs may have a Great Plains origin. It has been suggested that this style was part of cultural baggage which came to the Pecos region along with bison hunters following herds. Red Linear Style panels do not seem to fit with other styles in that they do not form an expected development from those styles which appear to have preceded it. The Red Linear Style of pictographs was defined based on schema, size, color, and location of sites. In scale, pictographs done in this style are diminutive and average about 20 inches in height. They are always painted in red; there are no known examples of bichrome or polychrome works. There are only eleven known Red Linear sites and several of these depict communal bison hunting (Kirkland and Newcomb 1967; Gebhard 1963; Greider 1966; Turpin 1984, 1989).

3. The Bold Line Geometric Style (the Late Prehistoric period) consists mainly of straight lines at varying angles and zoomorphic figures with sharply bent limbs. Only a few sites have been located that have pictographs executed in this style. Schema such as the atlatl or bow and arrow are not generally depicted , resulting in some disagreement on relative age to other styles. Geometric styles are common among cultures world-wide that utilize either a pictographic (painting) or petroglyphic (carving) form of rock art (Abie 1969; Brooks and Wakankar 1976; Curtis 1915). In the Lower Pecos manifestation of the geometric style of rock art, the figures are usually less than three feet in height and occur as both monochrome or polychromes. (Turpin 1986b, 1989).

4. The Red Monochrome Style is Post Archaic (approximately AD 1000). It is characterized by solid red ochre-like pigments. Depictions of animals are relatively life-like compared to other Lower Pecos styles and often up to ten feet or more in height. Clearly recognizable are many of the region's more common animals: catfish, rabbit, deer, turtle, snake, turkey, panther, and dog. Humans are shown in relatively fine detail with round heads, fingers, and ears that are easily detectable. Human images often have a bow and arrow in one hand (Turpin 1986c).

5. The Historic Style is more easily dated as it begins with the arrival of Europeans. The first Spaniards in the Lower Pecos area were probably with the 1590 expedition of Costano de Sosa. Therefore, the pictographs with European schema probably do not date to before 1590 AD.(Although Cabeza de Vaca was shipwrecked on the Texas coast in 1528; the first Missions --

with Spanish architecture -- were not built until 1708.) The scenes and figures depicted in this style are associated with Spanish missions and presidios.

Pictographs done in Historic Style commonly show: horses, guns, churches, European clothing, and other non-indian elements. It is well documented that Indians interacted with the Spanish; those interactions appear to have been the stimulus for some Historic pictographs. (Pictographs which record sensual experiences or actual events in the physical world help to validate theories that pictographs can have/do imply actual events as motivation for their execution versus the conjecture that pictographs are representations of deities or metaphors that are not from the sense-knowable world are the basis for much of pictographic imagery (Kirkland 1938, 1942; Kirkland and Newcomb 1967; Turpin 1988, 1989b).

Techniques/Methods of Lower Pecos Rock Art Painting

There are at least four different methods (or techniques) by which the pigments were applied to the limestone surfaces that form the "canvases" for the Lower Pecos pictographs. Grinding locally occurring pigments and minerals into powders and then combining these with liquids could easily have produced the paints which were then applied to the limestone surfaces.

The most common way of applying pigment was by the use of what can best be described as a vegetal fiber brush. Locally available agave plants provided an ample resource for such tools. Plant fiber brushes that still had pigment adhering to one end have been found in archaeological contexts at rock art sites in the region. Some of the larger pictographs are formed of a solid color placed on the rock surface with a series of overlapping brushstrokes. Other rock art panels are made up of single finely drawn lines. Regardless of temporal style, the brush was the most common tool used to paint pictographs.

A second method of applying pigment was the use of the artist's fingers. Although this technique apparently never enjoyed widespread use, as evidenced by the relative paucity of sites where this technique has been used, it appears to have been the favored technique of some Lower Pecos artists. The images created through the use of this means of applying pigment are uncomplicated and smaller in scale. Where a finger technique was employed, polka dot patterns formed by the fingerprints themselves were often used to fill in and complete schema or in combination with brushed lines to form images. At one rockart site, there are two deer images which were painted entirely using this technique.

In yet another method of painting (or perhaps drawing is a more appropriate term), liquified pigment was mixed with a hardener or binding agent such as bee's wax producing what can be described as a crayon. A drawing tool made of yellow limonite was found by A.T. Jackson at the Fate Bell Rockshelter excavations some sixty years ago. This mineral is commonly available in the region and comes in a range of oranges and yellows. It is relatively soft and seems ideally suited to the making of powdered pigment.

A fourth documented method of producing pictographic images in the Lower Pecos appears to have involved blowing liquified pigment onto the rock surface. Whether a tube was used or the pigment was sprayed directly from the mouth of the artist is not known. Most often, this technique is associated with red-stenciled handprints. The red stenciled handprints at Coyote Shelter were undoubtedly produced by this means. This technique has been found in numerous other cultures in the production of artworks.

Early Interpretations of Pictographs

Rock walls covered with anthropomorphic and zoomorphic images led many early archaeologists to infer that the pictographs represented the rituals of hunting cults (Campbell 1958). A more modern, broader interpretation is that a wide range of subject matter is present across all pictographic styles (Shafer 1986). Contemporary theories also suggest that pictographs were painted as an essential part of at least several different, and perhaps interrelated, kinds of rituals (J.H. Labadie 1989).

Such interpretations imply that the pictographs themselves may be by-products from rather than the objects of ritualistic activity. The superimposition of dozens of images done in different styles implies something about the purposes and value pictographs had for their creators. A painted image on rockshelter wall that was then painted over with more works may not have been as important as the reason it was placed there. Over painting could have been an attempt to cancel or acquire the power associated with an underlying (previous) pictograph. Other interpretations suggest that pictographs could be mnemonic devices associated with oral traditions, story-telling, renewal rituals, rites of passage, the invocation of some spiritual force, or magical exercise.

Clues from modern anthropology, and also related contemporary archaeological evidence, suggest that Pecos pictographs were most likely created by specifically designated individuals rather than by all members of the society. Medicine men, or shaman, are the

likely candidates. Even today, in Mexico and the Southwestern United States, the shaman is regarded as the possessor of special knowledge about supernatural forces. It is conjectured by some investigators that shaman may have fulfilled this same role in prehistoric cultures in which pictographs may have played an important part of the rituals surrounding man and his relationship with such forces (Shafer 1986).The pictographs may have been painted by the shaman during certain rituals.

Pictographs do not fulfill the criteria for written language, but neither do they seem to be simply exercises in aesthetic expressiveness. The "best guesses" of modern archaeologists suggest that these artworks constituted a form of communication about important aspects of the lives of the people of the Lower Pecos. For example: Bon Fire shelter (a bison kill site in the Pecos region dated at 9200 BC) and other area sites have Pleistocene (Ice Age) megafauna associated with what are possibly stone tools in carbon-14 dated contexts that could put humans at Pecos sites as far back as 10,000 BC. Such hunting expeditions could have served as the basis for some of the pictographs which show this activity (Red Linear style pictographs --circa AD 1200-1500 -- depict communal bison hunts).

Twentieth century value systems and social constructs are far removed from those of the creators of these pictographs and contemporary speculation about the meaning of many of the pictographs is regarded by archaeologists as just that. The Archaic, Late Prehistoric, and Historic people of this area are extinct. There is no current Native American group which claims the Lower Pecos as their ancestral or historic homeland. With the extinction of these cultures has passed the only firsthand information about Lower Pecos cosmology and symbology systems. The functions and purposes of the works done in prehistory appear to be lost to us forever. At this time, the Historic Style pictographs are the only rock art paintings which have substantial support for accurate postulations about their symbolism.

Contemporary cultural anthropologists and ethnographers have recorded the use of elaborate metaphors as commonplace in both the conversation and artworks of hunter-gatherer peoples. While such symbolic language indicates a rich and colorful oral history and visual vocabulary as well as the intelligence and reasoning skills of the user, it also illustrates one of the greatest difficulties in assigning meaning to early pictographs. What may appear to be a natural symbol or reference, such as a person or a cactus, may actually have been intended as an elaborate metaphor which carries obscure or nearly incomprehensible meaning for someone outside of the immediate cultural group in which it is produced. It follows that culture-specific metaphors would be lost with the end of the culture that generating them.

Summary

Regardless of the origin or intended purpose, the rock art of the Lower Pecos is certainly an expression of the cognitive world of those who created them. At some date in the near future it is expected that all of the sites in this region will be recorded and analyzed with a consistent methodology. A definition, analysis, evaluation, and judgement of these works done in accordance with a common schema would likely illuminate certain common denominators beyond those now used to differentiate Lower Pecos pictographic styles. At this time, terms like "an electric Jesus" and "a flying shaman" are used to label imagery common to more than a single site. The development and use of consistent terminology for the pictographs of the Lower Pecos would greatly facilitate the rate at which all such research can advance.

The cognitive world of the people of the Lower Pecos cannot be recreated. Pictographs (and other artifacts) make that world as available to us as it may ever be. A complete description of this rock art, with concomitant systematic analysis, and a comparison with similar two-dimensional works from around the world, are primary avenues that future research (of the type discussed here) can follow. It will take multi-disciplinary inquiry, such as this paper, to create new paradigms with which to study the old problem of understanding the Lower Pecos rock art.

And if enhanced understanding of prehistoric and historic rock art is to inform those involved in art study, then curricula must be developed which include such information. Substantial information is now available in the form of both written and visual materials in the literatures of archaeology, anthropology, and other related areas. Even though this is the case, it will take a great effort on the part of concerned art educators to ensure that the materials developed by and for scientists make their way into art education classrooms. One of the ways this can happen is through the deeper studies of Native American art in art history classrooms. It is with broadening a sense of possibilities in this regard that this paper has been presented.

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